



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,426	02/26/2004	Xiaoyu Li	DP-310234 (60,408-414)	4773
22851	7590	11/01/2006	EXAMINER	
DELPHI TECHNOLOGIES, INC.			ILAN, RUTH	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			3616	

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/787,426	LI ET AL.	
	Examiner	Art Unit	
	Ruth Ilan	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 6-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-10 and 13-22 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 8/15/06. These drawings are not accepted.
2. New Figure 6 is not accepted for two reasons: First, it introduces new matter. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: New Figure 6 includes a very different support than that shown in Figure 4, and as such it is not clear how the elements correspond. In addition to the new matter issues, it is not understood how the configuration shown in Figure 6 works. As connected in new Figure 6, the strap would "bunch up" rather than get pulled out from the brake.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the elongated element with the second end fixed to the steering column must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitations of these claims were added to claim 1, as amended. As such these limitations amount to double inclusion of the limitations and the scope is unclear.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 7-10, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al. (US 2002/0036404 A1.) Li et al. teaches a collapsible steering

column including a support (21) a steering column (12) and an energy absorbing mechanism (see Figure 8 and paragraph [0048]) that interconnects the steering column and the support (see paragraph [0046].) Li et al. further teaches an elongated element (152) and a brake (146, 160) for variably resisting the movement of the elongated element. Regarding claim 2, as best understood, the brake provides at least a minimal resistance, in that it provides some. The assembly includes at least one frictional member (140A or 140B) for frictionally resisting the movement of the elongated element and for adding to the resistance provided by the brake. Regarding claim 1, as amended, the elongated element is sufficiently flexible, in that it is flat metal strap, similar to that disclosed by the applicant in the instant application. Additionally, the metal strap of Li et al. continues to meet the limitations of claim 1, as amended, because it retains structural integrity, at least to the extent disclosed by the Applicant, in that it doesn't break. Please see the response to Arguments section below for further on this issue. Regarding claims 7-9, Li et al. teaches the computer system (see paragraph [0018].) Regarding claim 10, in the embodiment of Figure 10, Li et al. teaches a brake (194A) and a roller (194B) rotatable about an axis (195B.) Regarding claims 19 and 20, the roller is supported by the steering column and the elongated element is fixed to the support (see paragraph [0054].)

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 2002/0036404 A1) in view of Muller (US 2004/0211612 A1) Li et al. is discussed above and fails to specifically disclose that the brake is operable to prevent movement until 300 lbs of force is applied. Muller teaches tailoring the force response of a collapsible steering column to suit the characteristics of the occupant (see Figure 15) and further teaches that 300 lbs force is within the range contemplated (see 95% man, as a reference 2 kN is about 449 lbf.) It would have been obvious to one having ordinary skill in the art at the time of the invention to tailor the brake operation of Li et al. in view of the teaching of Muller in order to tailor the collapse to suit the characteristics of an occupant.

3. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (US 2002/0036404 A1) Li et al is discussed above, and teaches that roller is supported by the steering column and the elongated element is fixed to the support, rather than the opposite, as claimed. It would have been obvious to one having ordinary skill in the art at the time of the invention to support the roller on the support and fix the elongated element to the steering column, since it has been held that mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

Allowable Subject Matter

4. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 13-18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed 8/15/06 have been fully considered but they are not persuasive. Regarding claim 1, the Applicant asserts that Li et al does not disclose that the "elongated element is sufficiently flexible to provide insubstantial resistance to bending for allowing frictional engagement with the frictional member while retaining the structural integrity for returning to a pre-collision condition". The Examiner respectfully disagrees. Both Li et al. and the instant application disclose the use of a metal strap. In each instance the metal strap is bent around rollers, or frictional members. As such each has insubstantial resistance to bending. Regarding "retaining structural integrity", this language does not preclude plastic deformation. As noted, in the specification, on page 5, in the discussion of structural integrity, the Applicant discusses that such is met if the energy absorbing mechanism may be returned to a pre-collision condition...so long as the energy absorbing mechanism is capable of absorbing energy without the elongated element snapping or breaking. The metal strap of Li et al. does not snap or break. There is nothing in the claim language that precludes plastic deformation, and it is not disclosed that the metal strap of the instant application is for instance, a spring

Art Unit: 3616

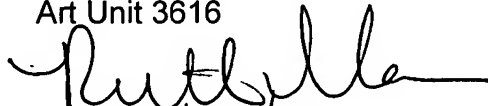
steel that does not bend plastically. It is noted that there is nothing in the claim language that requires a more narrow interpretation. As an example the claim language does not require "that there is no energy absorption due to bending", as discussed with regard to the 112 2nd issue.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth Ilan whose telephone number is 571-272-6673. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ruth Ilan
Primary Examiner
Art Unit 3616



10/24/06

RI

*Do Not
Enter*

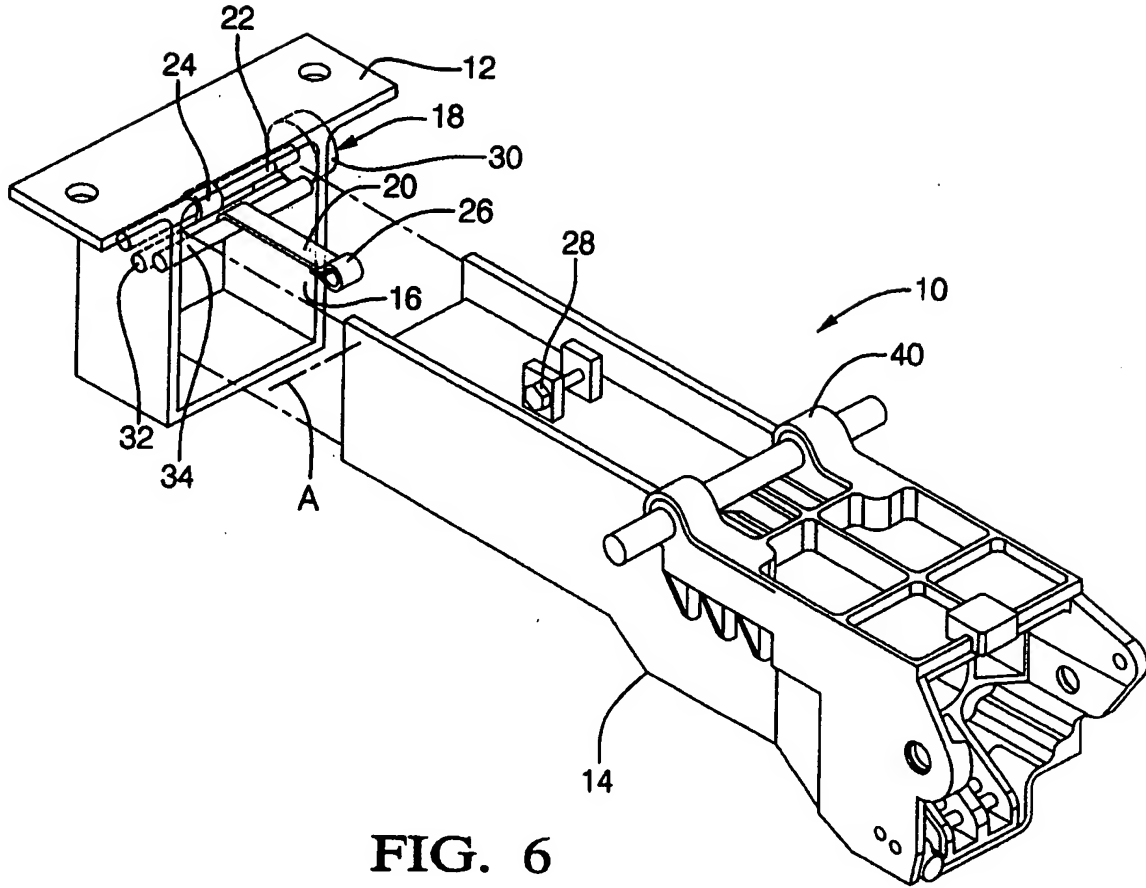


FIG. 6